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EXAMINER

DENNISON, JERRY B

ART UNIT PAPER NUMBER

2143

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,011

Applicant(s)

WARRIER ET AL.

Examiner

J. Bret Dennison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Action is in response Amendment for to Application Number 09811011 received on 18 January 2005.
2. Claims 1-37 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (U.S. Patent Number 6,381,646) in view of Molitor (U.S. Patent Number 6,661,799).

3. Regarding claim 1, Zhang discloses a method comprising a first machine communicating with a second machine using a protocol that sends the first machine's network configuration data in an application data sent to the second machine via a translating access point (Zhang, col. 1, lines 15-55, Zhang teaches using a Point-to-Point protocol wherein a negotiation takes place to configure the network layer, making it inherent that a machine sends its network configuration data in order to come to a negotiation, col. 4, lines 45-67, Zhang disclosed the machines communicating through a NAT gateway);

Zhang also teaches making connections through a network address translator so as to apparently originate from the address translator without breaking the protocol (Zhang, col. 4, lines 47-62).

However, Zhang does not teach receiving from a network configuration server a network configuration not subject to translation by the translating access point; and providing according to the protocol said received network configuration to the second machine so that said communicating may traverse the translating access point.

In an analogous art of using network address translators to facilitate peer-to-peer application communication, Molitor teaches a system which allows applications to request a NAT rule from an external server in the public Global Internet which would then provide the configuration of a private network and allow the application to make a connection to it (Molitor, col. 9, lines 40-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Zhang with Molitor in order to allow applications to request information concerning address translations to be performed, so those applications may send useful information to other applications for the purpose of allowing applications to communicate through the NAT device in the absence of defined rules for specific channels of communication (Molitor, see Abstract and Zhang, col. 3, lines 22-37).

4. Regarding claim 2, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 1, including wherein the network configuration data comprises a network address, the method further comprising:

establishing a tunnel with the first machine for receiving network traffic sent to the network address (Zhang, col. 5, lines 20-27).

5. Regarding claim 3, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 2, including wherein the tunnel is established between the network configuration server and the first machine (Zhang, col. 5, lines 1-5).

6. Regarding claim 4, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 1, including wherein the protocol is used for communication (Zhang, col. 6, lines 35-45). Molitor also discloses facilitating communication (Molitor, col. 4, lines 54-55) through applications such as Telephony (Molitor, col. 5, lines 40-43).

7. Regarding claim 5, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 1, including wherein the translating access point has a first interface communicatively coupled with a first network, and a second interface communicatively coupled with a second network, the method further comprising:

associating a network address with the second interface (Zhang, col. 5, lines 30-45 and 55-56);

receiving network traffic from the first machine on the first interface (Zhang, col. 5, lines 40-51); and

translating said received network traffic so that it appears to originate from the

network address associated with the second interface (Zhang, col. 5, lines 40-51).

8. Regarding claims 6, 17, and 18, Zhang and Molitor disclose a method for communicating through an access point coupling plural machines on a first network to a second machine on a second network by translating first network traffic so as to apparently originate from the access point, comprising:

receiving a request for a first address of a first machine on the first network (Molitor, col. 9, lines 40-41);

allocating a second address from a server on the second network (Zhang, col. 5, lines 30-35);

providing the second network address in response to the request (Molitor, col. 9, lines 41-47);

transmitting through the access point at least one network packet having a header comprising a packet origin, and a data payload comprising the second network address;

translating the header of the packet by the access point of the packet origin so that the network packet apparently originates from the access point (Zhang, col. 5, lines 40-51); and

using the second network address in the payload of the packet to provide a network configuration for a communications exchange (Zhang, col. 4, lines 45-65, Zhang disclosed using network address translation);

9. Regarding claim 7, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 6, including:

establishing a tunnel between the first machine and the server (Zhang, col. 6, lines 20-30); and

the first machine receiving, through the tunnel, network traffic sent to the second address (Zhang, col. 6, lines 20-30).

10. Regarding claim 8, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 7, including wherein the access point performs selected ones of: network address translation, and port translation on the at least one network packet (Zhang, col. 5, lines 45-51).

11. Regarding claim 9, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 6, including:

providing a network address translation (NAT) based router between the first machine and the second machine so that communication between said first and second machines is NAT translated at least once (Zhang, col. 5, lines 40-50).

12. Regarding claim 10, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 9, including wherein the NAT based router is the access point (Zhang, col. 5, lines 40-50).

13. Regarding claim 11, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 6, including:

communicatively coupling the server to the second network such that network traffic from the server reaches the second network without translation (Molitor, col. 9, lines 40-46).

14. Regarding claim 12, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 11, including wherein the second network is the Internet (Zhang, col. 4, lines 60-65).

15. Regarding claim 13, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 6, including wherein the packet origin address is the first network address (Zhang, col. 5, lines 30-40).

16. Regarding claim 14, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 6, including:

executing a networking application program, said program issuing the request for the first address of the first machine, and storing said provided second address as the data payload (Zhang, col. 5, lines 30-35, Zhang teaches establishing a session with a second address, where it is inherent that the address is stored);
wherein the networking application program is unaware of said translating (Zhang, col. 5, lines 40-50).

17. Regarding claim 15, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 6, including wherein the first machine comprises:

a network interface communicatively coupled to the first network (Zhang, col. 5, lines 55-56);

a first memory for storing an operating system providing network services (Molitor, Fig 3, 110); and

a second memory for storing a network driver communicatively coupling the network interface to said network services, said network driver performing said allocating the second address, and providing the second address responsive to the request for the first address (Zhang, col. 5, lines 35-50).

18. Regarding claim 16, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 15, including:

executing a networking application program which issues the request for the first address (Molitor, col. 9, lines 39-41); and

the network driver providing the second network address responsive to said networking application program request (Molitor, col. 9, lines 42-46).

19. Regarding claim 19, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 18, including facilitating communication (Molitor, col. 4, lines 54-55) through applications such as Telephony (Molitor, col. 5, lines 40-43) and connecting to an external server for a network configuration. However, Zhang and

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Molitor do not explicitly state notifying the network driver of success/failure of said establishing; and notifying said program of said success/failure.

It would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate notifying of success/failure in order to present the status of the request made by the application.

20. Regarding claim 20, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 19, including wherein:

the application program telecommunicates with the network driver; and the endpoint telecommunicates with the server (Molitor, col. 5, lines 40-43, Molitor teaches facilitating communication through Telephony).

21. Regarding claim 21, Molitor discloses a method for a first machine on an local area network (LAN) to communicate with a wide area network (WAN) through an access point configured to alter LAN network traffic so that it appears to originate from the WAN, the method comprising providing a WAN address to said program so that said program can embed the WAN address within the network traffic data (Zhang, col. 30-50). However, Zhang does not explicitly state:

providing layer-based network services including an application layer, a network driver layer, and a session layer, wherein said driver is called before said session layer;

executing an application program configured to identify a first address of the first machine, embed said identified first address within network traffic data, and send said

network traffic data to a communication endpoint; and

establishing a first communication session between said program and said driver, a second communication session between said driver and the server, and a third communication session between the server and the said endpoint.

In an analogous art, Molitor teaches providing layer-based network services including an application layer, a network driver layer, and a session layer, wherein said driver is called before said session layer (Molitor, Fig. 3);

executing an application program configured to identify a first address of the first machine, embed said identified first address within network traffic data, and send said network traffic data to a communication endpoint (Molitor, col. 9, lines 39-41); and

establishing a first communication session between said program and said driver, a second communication session between said driver and the server, and a third communication session between the server and the said endpoint (Molitor, col. 9, lines 39-46, Molitor teaches connecting to an external server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Zhang with Molitor in order to allow applications to request information concerning address translations to be performed, so those applications may send useful information to other applications for the purpose of allowing applications to communicate through the NAT device in the absence of defined rules for specific channels of communication (Molitor, see Abstract and Zhang, col. 3, lines 22-37).

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22. Regarding claim 22, Zhang and Molitor teach the limitations, substantially as claimed, as described in claim 21, including:

contacting a server on the WAN to obtain the WAN address (Molitor, col. 9, lines 39-43);

However, Molitor does not disclose receiving a call setup from said program for the endpoint', establishing a call from the server to the endpoint; connecting said program call to said driver; and transparently forwarding said program call by said driver to the server. It would have been obvious to one in the ordinary skill in the art at the time the invention was made that connecting to a server includes establishing a connection.

23. Regarding claim 23, Molitor teaches the limitations, substantially as claimed, as described in claim 21. However, Molitor does not explicitly state wherein the session layer comprises the Microsoft Winsock Application Programming Interface. It would have been obvious to one in the ordinary skill in the art at the time of the invention that the session layer comprises the Microsoft Winsock API because it is used to create applications that access low-level functions of TCP/IP.

24. Regarding claim 24, Molitor teaches the limitations, substantially as claimed, as described in claim 21. However, Molitor does not explicitly state wherein said network services are arranged according to the ISO/OSI model. It would have been obvious to one in the ordinary skill in the art at the time of the invention that said network services

are arranged according to the ISO/OSI model because it is the standard model for networking protocols and distributed applications.

25. Claims 25-37 include an apparatus performing the method contained in claims 1-24. Therefore claims 25-37 are rejected from the same art in the rejection of claims 1-24.

Response to Amendment

Applicant's arguments and amendments filed on 18 January 2005 have been carefully considered but they are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment (i.e., *by incorporating new limitations into the independent claims, which will require further search and consideration*) to the claims which significantly affected the scope thereof.

Applicant's arguments with respect to claims 1-37 have been fully considered but they are not persuasive. Applicant's arguments include the failure of previously applied art to expressly disclose the teachings of "communication between the first and second machine via a translating access point [see Applicant's Response, page 16]. The specification defines a translating access point as a NAT gateway, which is clearly disclosed in Zhang (col. 4, lines 47-67) in which multiple connections using NAT is provided using a gateway.

Applicant's arguments also include the failure of previously applied art to expressly disclose the teachings of "establishing a tunnel using an address carried in a payload portion of a data packet through an access point that shares a single address with multiple machines." This limitation defines what Network Address Translation is. As explained above, Zhang clearly disclosed using Network Address Translation.

Applicant's arguments also include the failure of previously applied art to expressly disclose the teachings of "calling the network driver layer before the session layer". Regarding the layers of the OSI Model, the network driver layer is layer 3, whereas the session layer is layer 5. The Network Driver layer provides switching and routing technologies, creating logical paths, known as virtual circuits, for transmitting data from node to node. Routing and forwarding are functions of this layer, as well as addressing, internetworking, error handling, congestion control and packet sequencing. The Session layer establishes, manages and terminates connections between applications. The session layer sets up, coordinates, and terminates conversations, exchanges, and dialogues between the applications at each end. It deals with session and connection coordination. Therefore, in order for the session layer to exist, the network driver layer would have to be called first. Because Molitor provides communication at and above these layers, Molitor disclosed calling the network driver layer before the session layer.

It is evident from the mappings found in the above rejection that the combination of Zhang and Molitor discloses the teaching of communication through Network Address Translation. Further, it is clear from the numerous teachings (previously and currently

cited) that the provision for using "Network Address Translation" was widely implemented in the networking art.

Thus, Applicant's arguments drawn toward distinction of the claimed invention and the prior art teachings on this point are not considered persuasive. It is also clear to the Examiner that Zhang and Molitor clearly teach the independent claims of the Applicant's claimed invention.

Applicant's arguments with respect to claims 1-37 are deemed moot in view of the following new grounds of rejection, necessitated by Applicant's amendment to the claims, which significantly affected the scope thereof.

Furthermore, as it is Applicant's right to continue to claim as broadly as possible their invention, it is also the Examiner's right to continue to interpret the claim language as broadly as possible. It is the Examiner's position that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique. As it is extremely well known in the networking art as already shown by Zhang and Molitor as well as other prior arts of records disclosed, the claimed invention is taught as well as other claimed features of Applicant's invention. By the rejection above, the applicant must submit amendments to the claims in order to distinguish over the prior art use in the rejection that discloses different features of Applicant's claimed invention.

It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art.

Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571)272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703)308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


J. B. D.
Patent Examiner
Art Unit 2143

